

CLAIMS

1. An electric machine including at least:
a magnetic field means for producing a magnetic field having lines of flux extending in a first direction; and
a support mounted for motion in at least one dimension in a plane relative
5 to the magnetic field means and provided with at least one electrically conductive path having a segment that extends through said magnetic field.
2. An electric machine according to claim 1, wherein said support is made of an electrically conductive material and is provided with a plurality of apertures disposed in board of an outer peripheral edge of said support, wherein said at least one electrically conductive paths are constituted by portions of said support that extend about said
5 apertures. *A*
3. An electric machine according to claim 2, wherein the support is in the form of a wheel having a central hub, spokes extending radially outward from said hub and an outer rim joining said spokes, wherein each aperture is defined by a space formed between adjacent spokes and sectors of the hub and rim between each adjacent spokes,
5 and each electrically conductive path comprises a pair of adjacent spokes and the sectors of the hub and the rim between which the pair of adjacent spokes extend.
4. An electric machine according to claim 3, further including induction means associated with said electrically conductive paths wherein electric currents flowing through said electrically conductive paths induce the current to flow through said induction means.
5. An electric machine according to claim 4, wherein said induction means is supported separately from said support.
6. An electric machine according to claim 5, wherein said induction means comprises a plurality of wound cores, each wound core having a core body made from a magnetically permeable material which interlinks adjacent apertures and an electric coil wound about said core, each coil provided with a lead that carries an induced current
5 generated by virtue of current flow through electrically conductive paths extending about corresponding adjacent apertures.

7. An electric machine according to claim 5, wherein said induction means includes: a core formed into a closed loop and provided with a plurality of windows through which respective spokes of said support pass, each window bound by opposed branches of said core that extend in the same plane as the support and opposed legs of the core that extend in a plane perpendicular to said support; and, a plurality of electrically
5 conductive coils, at least one coil wound about at least one of the branches or legs of the core of each window.

8. An electric machine according to claim 1, further including coupling means for mechanically coupling said support to a mechanical input that moves said support in at least one dimension in a plane.

9. An electric machine according to claim 8, wherein the one-dimensional motion induces an electric current in the conductive paths.

10. An electric machine according to claim 1, further including coupling means for mechanically coupling said support to a mechanical input that moves said support in at least two dimensions in a plane.

11. An electric machine according to claim 10, wherein said at least two-dimensional motion induces an electric current in said conductive paths.

12. An electric machine according to claim 1, further including coupling means for mechanically coupling said support to a mechanical input that moves said support with a non-rotary planar motion.

13. An electric machine including at least:
a magnetic field means for producing a magnetic field having lines of flux extending in a first direction;
a support capable of at least two-dimensional motion in a plane relative to
5 the magnetic field means and provided with a minimum of two electrical conductive paths, each path having a segment that extends through the magnetic field in a second direction that has a direction component extending at right angles to the first direction,
a first one of said segments disposed at a non-diametrically opposed
10 location on the support relative to a second one of said segments.

14. An electric machine according to claim 13 wherein each conductive path is provided with a lead that carries current generated from the conductive path.

15. An electric machine according to claim 14 wherein each lead is connected to a common junction.

16. An electric machine according to claim 15 wherein the common junction is connected to a cable.

17. An electric machine according to claim 13 wherein the support is rigidly attached to a mechanical input that moves the support in an at least two-dimensional motion.

18. An electric machine according to claim 17 wherein the at least two-dimensional motion induces an electric current in the conductive paths.